

Natural fiber for green technology in automotive industry: a brief review

ABSTRACT

Fiber reinforced polymeric composites have been known and widely used because of their high specific strength and modulus compared to metals. In the last few years, biomaterials listed as a demand technology to be exploring by researchers especially in industrial purpose. This is push by environmental awareness and the over use of petrol resources lead to the development of new materials, called biocomposites, which will maintain a better future. This paper will be discussing about a brief review of natural fibers, use in automotive industry to achieve a green technology target in manufacturing of cars specifically. It's a fact that, related to weight reduction, the automotive industry can take advantages of using these materials, not only because of extinction of oil reserve, but because of high ability and importance of these materials itself in automobiles. Currently, most composites in the market are focused with long-term durability design while using nondegradable polymeric resins such as epoxies and high-strength fiber such as glass. All these materials prove to be a good characteristic of composite but still lack in environmental concern. This polymer and fiber are derived from petroleum, a nonreplenishable commodity. The momentum is to use biocomposites in common plastics to improve performance. Since the main purpose of this paper is to show a bio-composite which is suitable to replace the existing interior of automotive design, the work has focused on obtaining that biocomposite, taking account into the raw-materials cost reduction and the maintenance of the manufacturing process based on current scenario. The automotive industry is in their way to expand green technology in composites because the need is greatest. But producing the composites is energy intensive and polluting, while the durability of conventional composites, often seen as an advantage, is also their biggest challenge. Current fibers use in industry right now is difficult to dispose. They do not degrade naturally and could linger for generations.

Keyword: Reinforced; Environmental awareness; Automotive industry